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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,955	08/04/2003	Louis J. Bintz	14414-011001	5172
26191	7590	06/25/2007		
FISH & RICHARDSON P.C. PO BOX 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER VARGOT, MATHIEU D	
			ART UNIT 1732	PAPER NUMBER
			MAIL DATE 06/25/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/633,955	Applicant(s) BINTZ ET AL.	
	Examiner Mathieu D. Vargot	Art Unit 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al in view of Dorn essentially for reasons of record noting the following.

Upon closer review of Zhang et al, the Oh et al article has been dropped as being cumulative with respect to that taught in Zhang et al. Namely, Zhang et al discloses dry etching (ie, RIE) the film 208 which is the core film to form ribs 216—see Fig. 2D-- as generally set forth in instant claims 4, 12 and 13. It is submitted that these ribs function in the manner set forth in instant claim 7. Also, the instant metal masks are well known and would have been obviously used in lieu of, or in conjunction with, the photoresist 212 in Fig. 2B to make the desired rib structure. Dry etching a second electro-optic film to provide similar ribs would have been obvious over Zhang et al dependent on the exact optical properties desired for the waveguide. Admittedly, Zhang et al does not teach a second electro-optic film which would be treated in the manner that the first film (ie, core 208) is. However, that is why Dorn is applied. Dorn does not show a waveguide in the sense of the instant or that taught in Zhang et al. However, it is respectfully submitted that Dorn provides a teaching to one of ordinary skill in the art how to **sequentially pole different electro-optic layers to arrive at a desired refractive index profile**. That is the reason Dorn has been applied, the reference disclosing the sequential deposition of different electro-optic layers wherein each layer

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is individually poled, either before or after crosslinking the layer—see Dorn column 3, lines 25-38 and particularly lines 57-65. The reason why one of ordinary skill in the art would look to Dorn would be to form a slab waveguide, which has more than one electro-optic layer to allow for selective tuning of the waveguide so that such would be tailored for a desired use. It is respectfully submitted that the instant claims are obvious over the prior art as applied. Further, it is believed that such art has been applied in a manner consistent with the skill level of this art.

2. Applicant's arguments filed April 25, 2007 have been fully considered but they are not persuasive. Applicant's arguments have been noted but are not persuasive. In that the rejection was apparently misunderstood, or not worded properly, it has been set forth in more detail in this action, albeit Oh et al has been dropped as being cumulative with respect to Zhang et al. Indeed, it is understood that the device of Dorn is not a waveguide. However, it is submitted that the general method taught therein to form electro-optic layers of different refractive indices would be applicable in forming a waveguide and in fact would be clearly known to those of ordinary skill in the poling art. The instant invention and that of Zhang et al are directed to the poling art. It should be noted that the rejection **does not propose** to combine the devices of Zhang et al and Dorn as suggested by applicant. Rather, the rejection proposes to employ the deposition and poling method taught in Dorn to the formation of a waveguide. Since slab waveguides with more than one electro-optic layer are well known in the art, it is submitted that such a modification is not that far-fetched.

3. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mathieu D. Vargot whose telephone number is 571 272-1211. The examiner can normally be reached on Mon-Fri from 9 to 6.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson, can be reached on 571 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Vargot
June 19, 2007


Mathieu D. Vargot
Primary Examiner
Art Unit 1732

6/19/07